

Annual Review of Progress

On March 18, 2015, the Data Team presented the [Annual Review of Progress](#) to the Education Council to review available performance data from fiscal year 2014. The Data Team and Council discussed:

- Goal 1, Objectives 1.1, 1.2
- Goal 4, Objective 4.3
- Goal 5, Objectives 5.1, 5.2

This document summarizes the discussion points and the lists the proposed ideas. Raw notes and comments are included at the end.

Data Team Members:

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- Marissa Jones
- Lisa Nakamura
- Christopher Nelson
- Valerie Williams

Key Takeaways

1. The Annual Review is an opportunity for the Council to course correct. Therefore, the presentation must improve how it bridges program efforts with the available data. One step is to present a more selective view of the data around evidence of progress rather than just presenting everything we have for an objective.
2. New evidence of progress statements need to be added over time, as different parts of the objective need evidence and measures associated with them. Many new measures were discussed. We will keep track by mapping the part of the objective to each evidence of progress statement and measure.
3. Not all of the proposed ideas can be enacted. Each requires different level of time and Council engagement to develop. The Data Team will review the ideas, outline a plan for measurement, and prioritize based on available resources.

Goal 1, Objective 1.1

The first presentation looked at data from formal education programs, informal education programs, and education products.

Discussion:

- The primary topic of discussion was on measuring and reporting knowledge gain for those programs that already measure it and that work directly with students and people where it is possible. BWET collects educator's perceived change in student knowledge; NERRS has decided not to go down this road.
- A secondary topic was about contact time and measuring it during outreach and informal education programs.

Proposed Ideas:

1. Group programs (formal, informal, products) by outcome level (upstream/downstream): Understanding (Tier 2 or 3); Awareness (Tier 1); Dissemination/Reach (Tier 1).
2. Develop common measure for reporting of knowledge gain.
3. Develop common measure for reporting of contact time (proxy for awareness?)
4. Develop common measure for number of education products disseminated.
5. Provide webinars for measuring knowledge gain.
6. Define domain of knowledge related to NOAA.

Goal 1, Objective 1.2

The second presentation looked at data from professional development programs, website portals, and the Working Group activities.

Discussion:

- The primary topic of discussion was measuring websites that capture their various educational uses.
- A secondary topic was about measuring knowledge gain indirectly as a result of professional development.

Proposed Ideas:

1. Revisit the common measure definition for education website, broaden scope.
2. Follow up with Comms and Web teams to identify existing ForeSee data.
3. Implement ForeSee survey on education website, identify audience and intentions.

Goal 4, Objective 4.3

The third presentation looked at data about postsecondary students that participate in Higher Education programs.

Discussion:

- The primary topic of discussion was on career interest at all levels from elementary, middle, high and college levels (Objective 4.1 introduced by the Goal 4 diagram).
- in-kind investment in postsecondary students (we have several of these types of programs in Fisheries) where funding is not necessarily spent on supporting post-secondary students in terms of internships or programs, but we host them in career-related activities (e.g., field trips and career explorations) and foster longer-term relationships with students or undergraduate/graduate programs so that students become more aware of opportunities within NOAA disciplines that are available to them.

Proposed Ideas:

1. **Develop a common measure around two-year follow up, NOAA-related employed.**
2. Review the literature on STEM career interest development.
3. Develop a common measure for career interest (elementary through postsecondary).
4. **Collect data from program participants ask where they developed their interest in a NOAA-related career.**
5. Review Center for Ocean Leadership/NOSB [evaluation reports](#)
6. **Develop measures for the synergies between NOAA programs.**
7. Develop dataset on demographics of workforce (NOAA, discipline, Nation).
8. Develop outreach measure for students of all ages.

Goal 5, Objective 5.2

The fourth presentation looked at the process of strategic and implementation planning.

Discussion:

- The primary topic of discussion was shifting the focus of progress towards the constituent needs and national initiatives part of the objective.

Proposed Ideas:

1. Develop survey for i-planning retreat to gather feedback on effectiveness of incorporating information for NOAA Education priorities.
2. Development of a process map that defines the set of steps required to ensure adequate data collection and analysis for setting NOAA's education priorities.
3. Documentation of the conceptual mapping process as basis for updating strategic plan goals and objectives.
4. Documentation of rationale and data sources and opportunities for feedback in strategic planning process.

Goal 5, Objective 5.1

The fifth presentation looked at data about presented Annual Accomplishments and responding to data calls, or taskers.

Discussion:

- The primary topic of discussion was shifting the focus of progress towards the “support” part of the objective.

Proposed Ideas:

1. Develop guidance for collecting FY15 Annual Accomplishments stories.
2. Include topics as a secondary Congressional data field.
3. Define “support” set of measures, e.g. budget request levels, budget changes, champions, Congressional site visits.
4. Develop measures for number of times data is used for data calls and percent of data that is never been used.

Annual Review Process

Proposed Ideas:

- Review data presentation with programs and stakeholders prior to Annual Review. The additional of a written report would allow for a deeper look by Council members.
- Process timeline, be clear when will programs get a chance to have a conversation about the data, what's needed, what's collected, what's reported, and what's reviewed.
- Unified Data Call, map common measures to the Objectives and Evidence of Progress. Since this is the primary data source, we need to understand what we have and where we have gaps. See Evidence of Progress alignment data collected in 2014.
- Program-specific, programs have lots of data not reported in the Unified Data Call, that they could contribute but don't. Can we develop a reporting plan MOU type document with each program that outlines the data they will be reporting for each common measures and data that they would like to report program-specific.
- Identify the implications of the result.

Raw Notes

John's and Christopher's Notes during presentation

- Review data presentation with programs and stakeholders prior to Annual Review
- Of the proposed ideas, provide a prioritized list of actions for Council to approve
- What type of outcomes do we want? Accountable or Contributory?
- Need better EoPs, more defined targets, not numbers but more defined. Map performance measures to EoPs and portfolios to objectives.

1.1

- Include informal programs with gain measure
- Group programs by outcome rather than by audience ala Shedd Aquarium
 - Understanding, Awareness, Dissemination
- Measure contact time (outreach events)
- Many education programs conduct Pre/Post surveys to measure knowledge gain; some do not, depending on the nature of the program and capacity issues. Note: it may be easier to measure knowledge gain when a program works directly - rather than indirectly (i.e., dissemination of materials) - w/ an audience. Other programs measure "perception" of knowledge gain. JB: Do we want to use this measure to show progress? RESPONSE: TBD. Issue re: capacity raised.

1.2

- Educators value the total website for information (Frank, Bruce); Expand the scope of education on the web;
- NOS ForeSee results; 30% are educators and students (Ask Bruce for results)
 - They are looking for podcast, videos
 - Comms and Web teams may already collect and analyze this data
- Take an audience perspective, what does a student want from their web visit experience
- WG's also contributed to these measures
- FN supported the idea of using ForeSee survey. OED should check if others are already implementing the resource.

1.3

- Think in terms of Informal Learning Spaces - Special Places, Visitor Spaces

Goal 1 Diagram

- Logic gating, can we measure parts of the stream at different times
 - Establish what's a normal range of values for the measure in the stream
- Without evaluating the goal, we will never know
- NOAA-unique aspect of understanding, Ocean and Climate Literacy

4.3

- JYB: Visualize the size of the pipeline
- Measure the synergy between programs

Goal 4 diagram

- Add informal to the diagram (DONE)

- Develop a common measure around two-year follow up, NOAA-related employed
- Develop a career interest measure
- What does the research say about career interest, when and how?
 - Can do retrospective studies of the types of experiences that foster career interest. Center for Ocean Leadership already did this with NOSB grads.
 - Might be able to look at applications by students, if they say anything.
- KJ: Work with Cooperative Science Centers to standardize data collection/entry to database
- KJ: Improve post-graduation data for Hollings & EPP USP (Evaluation, Voluntary Alumni Update System)
- CM - Look at data collection for “career interest” including from informal education programs. FN - suggested the need to also use the latest research to guide where we look... i.e., if interest begins in the early grades, we may need to look there.
- Steph: for goal 4 discussion: if we do not have those targeted audiences in our goal 1-3 we have no expectation that the career interest will matriculate from general education experiences...?
- Steph: I think we need to leave those bread crumbs earlier than post secondary

5.2

- Lean more on the constituent needs and national initiatives portion of the objective.
- Look at the Concept maps as a data source
- VW: Annual monitoring to determine the extent to which NOAA Education activities align with and report progress toward strategic plan goals and objectives
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- CM: Constituent needs should be intentionally incorporated. MJ: Proposed making the conceptual map public. Question raised. RESPONSE: At present, the map is more or less for internal purpose. In the past, the consensus was to focus on the near-future - especially given the uncertainties of federal funding.
- VW: Develop survey for i-planning retreat to gather feedback on effectiveness of incorporating information for NOAA Education priorities

5.1

- # of times stories are used in data calls
- % of data that never gets used: Utilization Rate
- Topical analysis of stories as a secondary Congressional priority; keyword field
- FN: Congress should also include data re: topics of interest (i.e., climate, oceans).
- Lean more on the “support” part of the objective; budget changes and requests
- Defining target as “maintaining programs”
- Knowing who your champions are
- Knowing when members are visiting NOAA sites
- Congressional and state level reporting
- Investments; Support; Leverage; Requirements that are tacked on but not funded
- MJ: Complete and disseminate FY14 Report. Develop guidance for FY15 Report.
- Will partnerships be highlighted? RESPONSE: Absolutely.

Suggestions for presenting data

- Use TIERS and the color scheme as a dashboard
- Which EoPs should we focus on? (I think this is a Council decision)
- No evidence is a bad indicator.
- Can we look across programs to develop evidence for Tier 4?
- We can't measure everything, adding more is not a strategy. Add one, remove one?

Comment from Stephanie Bennett

Steph: for goal 4 discussion: if we do not have those targeted audiences in our goal 1-3 we have no expectation that the career interest will matriculate from general education experiences...?

Steph: I think we need to leave those bread crumbs earlier than post secondary

Kristen's response

Regarding goals 1-3, I was thinking the "from all sectors of society" makes the goals inclusive, but Stephanie seems to be suggesting we should call out underrepresented groups more specifically. I was thinking that's what objective 4.1 is for, but may be worth discussing.

I think she's right that we need to connect the pipeline from K-12 to students at the post secondary level that would be eligible to apply for NOAA scholarship and internship opportunities. I was just chatting with Tracy after the meeting today about whether Sanctuaries education programs are providing info to high school students about NOAA scholarship opportunities (especially because she mentioned underrepresented groups). It strikes me that providing info on our scholarship opportunities at the upper K-12 level (through Sanctuaries programs, BWET grantees, etc) may be a simple

Comment from Lisa Hiruki-Raring

I wanted to follow up on your presentation about the Goal 4 objectives from the NOAA Ed Council Meeting... the objective that you were reporting on (4.3) was looking at post-secondary students pursuing and completing degrees in NOAA-related disciplines. Christos made the comment that I had brought up a point about in-kind investment in postsecondary students (we have several of these types of programs in Fisheries) where funding is not necessarily spent on supporting post-secondary students in terms of internships or programs, but we host them in career-related activities (e.g., field trips and career explorations) and foster longer-term relationships with students or undergraduate/graduate programs so that students become more aware of opportunities within NOAA disciplines that are available to them.

I feel that this investment can pay off quite dramatically (we have employees who started out as undergraduates visiting our science center on a day-long field trip) and should be considered as a measure to be tabulated in looking at progress toward this

particular goal. I also think it fits in with the discussion that we had during the Council meeting about the pipeline of recruitment starting early on (K-12) and continuing into undergraduate and graduate degrees.

Suggestions from Bronwen

- Process timeline, when will programs get a chance to have a conversation about the data, what's needed, what's collected, what's reported, and what's reviewed.
- Unified Data Call, map common measures to the Objectives and Evidence of Progress. Since this is the primary data source, we need to understand what we have and where we have gaps. See Evidence of Progress alignment data collected in 2014.
- Program-specific, programs have lots of data not reported in the Unified Data Call, that they could contribute but don't. Can we develop a reporting plan MOU type document with each program that outlines the data they will be reporting for each common measures and data that they would like to report program-specific.

Valerie's Feedback

- Would have like to have more conversations as follows, "if this data or result, then what is the implication of that?"
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Debrief notes with Christos

- Annual Review is an opportunity to **course correct**.
- A written report format would provide an opportunity for more in-depth, reflective feedback.
- Feedback from each program manager/Council member is needed to inform their reporting plan.
- Next year's review would have two sections: Part 1, Where are we with the implementation plan? (joint actions, programmatic actions) Part 2, where are we with the strategic plan? (baseline, targets, comparisons)